

REMARKS

The Office Action mailed December 8, 2003 has been received and its contents carefully noted. This Amendment is being filed concurrently with a Request for Continued Examination. Reconsideration of this application is respectfully requested in view of the foregoing amendments and comments set forth below.

By this Amendment, claim 14 is amended to positively recite that "the dark field stop is arranged to block a central beam in the receiver beam path" and claim 29 is amended to state that the "photo diode array containing at least two photo diodes". New claims 38-41 are presented. Accordingly, claims 14-41 are pending in the application, with claims 14 and 29 being the independent claims.

Claims 14-15, 28 and 30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over "Correction algorithms in laser scanner dimension measurement system", pages 57-60, IEE Proceedings-A, Vol. 139, No. 2, March 1992 to Chang et al (hereinafter referred to as "Chang") as described in paragraph 2 of the Action. Claims 18-27 and 34-37 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chang in view of U.S. Patent No. 5,691,839 to Kobayashi as explained in paragraph 3 of the Action. Claims 16-17 and 31-33 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chang in view of U.S. Patent No. 4,432,648 to Musto, et al (hereinafter referred to as "Musto") as described in paragraph 4 of the Action. Claim 29 was rejected under 35 U.S.C. § 102(b) as being anticipated by Chang for the reasons set forth in paragraph 6 of the Action. In view of the foregoing amendments to the claims, it is believed that these rejections are moot and that claims 14-29 are patentable over the art of record for at least the reasons set forth below.

As is noted by the Examiner, Chang does not disclose a dark field stop disposed ahead of a photo detector in the receiver beam path as required by independent claim 14. It is the Action's position that "it would have been obvious to a person having ordinary skill in the art to provide a dark field stop for the purpose of preventing directly reflected near specular laser light and any light diffused by optical components from reaching the photo detector and a beam splitter for the purpose of redirecting the light beam." It is respectfully submitted that this motivation is not supported by the prior art, particularly the prior cited in the Action. As described on page 5, lines 1-15 of the originally filed specification, the main purpose of a dark field stop is to block the central laser path, i.e. the direct laser beam, and not to block light prorogating near the axis of the laser beam. For the purpose and motivation cited in the Action, a skilled person would probably use a diaphragm, which has the opposite effect of dark field stop. As shown in Figs. 3-5, a dark field stop (15) is disposed in front of a diode (6). As clearly shown in Figs. 3 and 4, the dark field stop (15) is arranged to block a central beam of the receiver beam path.

As argued in the September 17, 2003 Amendment, Chang discloses a laser scanner with a single photo diode in the receiver module (See Fig.1). This single photo diode outputs a constant (high) voltage if the laser scans a region without the object and outputs a low voltage if an object interrupts the scanning laser beam. Thus, Chang measures the time period of the low voltage output signal, and in correlation with the scanning speed of the laser beam to calculate the dimension of the interfering object. Nowhere does Chang disclose, teach or even suggest the use of a dark field stop blocking the direct laser beam in its laser scanner. If Chang was modified with a dark field stop, it is respectfully submitted that a very different output signal would result than the output signal taught by Chang. That is, Chang teaches calculating the dimension of an

interfering object when the object interrupts the scanning laser beam. Independent claim 14 positively recites that the dark field stop is arranged to block a central beam in the receiver beam path. Nowhere does Chang disclose, let alone teach or suggest providing a dark field stop and it is respectfully submitted that Chang would not have been modified to include a dark field stop as claimed by Applicant. There is no motivation to provide Chang with such a dark field stop as Chang would calculate the dimensions of the same. Accordingly, independent claim 14 and dependent claims 15, 28, and 40-41 are believed to be patentable over any combination of Chang.

Kobayashi is directed to a laser scanning optical microscope. Nowhere does Kobayashi disclose a dark field stop as disclosed and claimed by Applicant. Accordingly, Kobayashi fails to cure the deficiency of the rejection of claim 14 as discussed above. As such, claims 18-27 are allowable at least for the reasons given above with respect to independent claim 14.

Musto is directed to a multiple dimensioned laser gauge where parallel rays are directed toward a work piece (20) so that the laser gauge (11) may determine the dimension of this work piece. Nowhere does Musto disclose, let alone teach or suggest, employing a dark field stop that is arranged to block a central beam in the receiver beam path as claimed by Applicant. Accordingly, claims 16-17 are believe to be patentable over any combination of Chang as discussed above.


Claim 29 positively recites a photo diode array containing two or more photo diodes or a position restoring photo diode. Chang discloses a single photo diode, and moreover, because of the measuring principle involved, Chang would not utilize an array containing two or more photo diodes or a position restoring diode. It is the Action's position that Chang discloses a "1 x 1 photo diode array". However, Change cannot disclose, teach or suggest the photo diode array

containing two or more photo diodes as claim 29 presently recites. Accordingly, Chang cannot anticipate claim 29 and it is believed that claims 30-37 and 36-39 depending therefrom are patentable over the prior art of record at least for the reasons discussed above.

All of the stated grounds of rejections have been properly traversed, accommodated or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all previously outstanding rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance.

If the Examiner believes that additional issues remain and that an interview with Applicant's representative would be helpful, the Examiner is invited to call the undersigned at the number listed below.

Respectfully submitted,



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